

SEQUENCE LISTING

<110> Feder, J. N.

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<120> A NOVEL HUMAN G-PROTEIN COUPLED RECEPTOR, HGPRMY6,
EXPRESSED HIGHLY IN SMALL INTESTINE

<130> D0040NP/3053-4119US3

<140> TBA

<141> 2001-09-26

<150> 60/235,602

<151> 2000-09-27

<150> 60/306,604

<151> 2001-07-19

<150> 60/315,412

<151> 2001-08-28

<160> 81

<170> PatentIn Ver. 2.1

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<212> PRT

<213> Homo sapiens

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Val Ser Ser Ser Thr Phe Ile His Thr Asn Val Asp Gly Leu Asn Pro
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Asp Ala Gln Thr Glu Leu Gln Val Leu Leu Asn Met Thr Lys Asn Tyr
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Thr Lys Thr Cys Gly Phe Val Val Tyr Gln Asn Asp Lys Leu Phe Gln
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Ser Lys Thr Phe Thr Ala Lys Ser Asp Phe Ser Gln Lys Ile Ile Ser
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Ser Lys Thr Asp Glu Asn Glu Gln Asp Gln Ser Ala Ser Val Asp Met

09664-0964
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Tyr Pro Lys Ser Leu Asp Ile Leu Ser Asn Val Gly Cys Ala Leu Ser				
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Val Thr Gly Leu Ala Leu Thr Val Ile Phe Gln Ile Val Thr Arg Lys				
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35 40 45

Asp Val Ile Met Ile Glu Ser Ala Asn Tyr Gly Arg Thr Asp Asp Lys
50 55 60

Ile Cys Asp Ser Asp Pro Ala Gln Met Glu Asn Ile Arg Cys Tyr Leu
65 70 75 80

Pro Asp Ala Tyr Lys Ile Met Ser Gln Arg Cys Asn Asn Arg Thr Gln
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Cys Ala Val Val Ala Gly Pro Asp Val Phe Pro Asp Pro Cys Pro Gly
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Thr Tyr Lys Tyr Leu Glu Val Gln Tyr Glu Cys Val Pro Tyr Lys Val
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Glu Gln Lys Val Phe Leu Cys Pro Gly Leu Leu Lys Gly Val Tyr Gln
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Asp Pro Leu Gln Ala Ser Asp Lys Ile Tyr Tyr Met Pro Trp Thr Pro
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Tyr Arg Thr Asp Thr Leu Thr Glu Tyr Ser Ser Lys Asp Asp Phe Ile
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Ala Gly Arg Pro Thr Thr Thr Tyr Lys Leu Pro His Arg Val Asp Gly
195 200 205

Thr Gly Phe Val Val Tyr Asp Gly Ala Leu Phe Phe Asn Lys Glu Arg
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Thr Arg Asn Ile Val Lys Phe Asp Leu Arg Thr Arg Ile Lys Ser Gly
225 230 235 240

Glu Ala Ile Ile Ala Asn Ala Asn Tyr His Asp Thr Ser Pro Tyr Arg
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 260 265 270

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 275 280 285

Gln Leu Asn Pro Tyr Thr Leu Arg Ile Glu Gly Thr Trp Asp Thr Ala
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Tyr Asp Lys Arg Ser Ala Ser Asn Ala Phe Met Ile Cys Gly Ile Leu
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Tyr Val Val Lys Ser Val Tyr Glu Asp Asp Asp Asn Glu Ala Thr Gly
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 370 375 380

Val Lys Tyr Ser Leu Asp Phe Gly Pro Leu Asp Ser Arg Ser Gly Pro
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Trp Asn Leu Gly Arg Ser Thr Thr Pro Ser Leu Pro Gly Arg Arg Asn
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Thr His Leu Pro Ser Ala Ala Ser Gln Ile Pro Ala Met Glu Glu Ser
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Cys Glu Ala Val Glu Ala Arg Glu Ile Met Trp Phe Lys Thr Arg Gln
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Leu Lys Ser Gly Glu Thr Ala Ala Asn Ile Ala Arg Glu Leu Ala Glu
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740 745 750

Tyr Leu Ser Thr Glu Asn Ala Ser Met Lys Leu Gly Thr Glu Ala Met
755 760 765

Ser Thr Asn His Ser Val Ile Val Asn Ser Pro Val Ile Thr Ala Ala
770 775 780

Ile Asn Lys Glu Phe Ser Asn Lys Val Tyr Leu Ala Asp Pro Val Val
785 790 795 800

Phe Thr Val Lys His Ile Lys Gln Ser Glu Glu Asn Phe Asn Pro Asn
805 810 815

Cys Ser Phe Trp Ser Tyr Ser Lys Arg Thr Met Thr Gly Tyr Trp Ser
820 825 830

Thr Gln Gly Cys Arg Leu Leu Thr Thr Asn Lys Thr His Thr Thr Cys
835 840 845

Ser Cys Asn His Leu Thr Asn Phe Ala Val Leu Met Ala His Val Glu
850 855 860

Val Lys His Ser Asp Ala Val His Asp Leu Leu Leu Asp Val Ile Thr
865 870 875 880

Trp Val Gly Ile Leu Leu Ser Leu Val Cys Leu Leu Ile Cys Ile Phe
885 890 895

Thr Phe Cys Phe Phe Arg Gly Leu Gln Ser Asp Arg Asn Thr Ile His
900 905 910

Lys Asn Leu Cys Ile Ser Leu Phe Val Ala Glu Leu Leu Phe Leu Ile
915 920 925

Gly Ile Asn Arg Thr Asp Gln Pro Ile Ala Cys Ala Val Phe Ala Ala
930 935 940

Leu Leu His Phe Phe Phe Leu Ala Ala Phe Thr Trp Met Phe Leu Glu
945 950 955 960

Gly Val Gln Leu Tyr Ile Met Leu Val Glu Val Phe Glu Ser Glu His
965 970 975

Ser Arg Arg Lys Tyr Phe Tyr Leu Val Gly Tyr Gly Met Pro Ala Leu
980 985 990

Ile Val Ala Val Ser Ala Ala Val Asp Tyr Arg Ser Tyr Gly Thr Asp
995 1000 1005

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Gly Pro Ala Thr Leu Ile Ile Met Leu Asn Val Ile Phe Leu Gly Ile
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Ala Leu Tyr Lys Met Phe His His Thr Ala Ile Leu Lys Pro Glu Ser
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Gly Cys Leu Asp Asn Ile Lys Ser Trp Val Ile Gly Ala Ile Ala Leu
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Leu Cys Leu Leu Gly Leu Thr Trp Ala Phe Gly Leu Met Tyr Ile Asn
 1075 1080 1085

Glu Ser Thr Val Ile Met Ala Tyr Leu Phe Thr Ile Phe Asn Ser Leu
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Gln Gly Met Phe Ile Phe Ile Phe His Cys Val Leu Gln Lys Lys Val
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Arg Lys Glu Tyr Gly Lys Cys Leu Arg Thr His Cys Cys Ser Gly Lys
 1125 1130 1135

Ser Thr Glu Ser Ser Ile Gly Ser Gly Lys Thr Ser Gly Ser Arg Thr
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Pro Gly Arg Tyr Ser Thr Gly Ser Gln Ser Arg Ile Arg Arg Met Trp
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Asn Asp Thr Val Arg Lys Gln Ser Glu Ser Ser Phe Ile Thr Gly Asp
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Ile Asn Ser Ser Ala Ser Leu Asn Arg Glu Pro Tyr Arg Glu Thr Ser
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35 40 45

Leu Leu Gln Gln Pro Ala Ala Glu Arg Ser Thr Ala His Arg Gly Gln
50 55 60

Gly Pro Arg Gly Thr Ala Arg Gly Val Arg Gly Pro Gly Ala Pro Gly
65 70 75 80

Ala Gln Ile Ala Ala Gln Ala Phe Ser Arg Ala Pro Ile Pro Met Ala
85 90 95

Val Val Arg Arg Glu Leu Ser Cys Glu Ser Tyr Pro Ile Glu Leu Arg
100 105 110

Cys Pro Gly Thr Asp Val Ile Met Ile Glu Ser Ala Asn Tyr Gly Arg
115 120 125

Thr Asp Asp Lys Ile Cys Asp Ser Asp Pro Ala Gln Met Glu Asn Ile
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Arg Cys Tyr Leu Pro Asp Ala Tyr Lys Ile Met Ser Gln Arg Cys Asn
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Asn Arg Thr Gln Cys Ala Val Val Ala Gly Pro Asp Val Phe Pro Asp
165 170 175

Pro Cys Pro Gly Thr Tyr Lys Tyr Leu Glu Val Gln Tyr Glu Cys Val
180 185 190

Pro Tyr Lys Val Glu Gln Lys Val Phe Leu Cys Pro Gly Leu Leu Lys
195 200 205

Gly Val Tyr Gln Ser Glu His Leu Phe Glu Ser Asp His Gln Ser Gly
210 215 220

Ala Trp Cys Lys Asp Pro Leu Gln Ala Ser Asp Lys Ile Tyr Tyr Met
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Pro Trp Thr Pro Tyr Arg Thr Asp Thr Leu Thr Glu Tyr Ser Ser Lys

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Leu Phe Leu Ile Gly Ile Asn Arg Thr Asp Gln Pro Ile Ala Cys Ala		
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Val Phe Ala Ala Leu Leu His Phe Phe Phe Leu Ala Ala Phe Thr Trp		

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Met Phe Leu Glu Gly Val Gln Leu Tyr Ile Met Leu Val Glu Val Phe		
1025	1030	1035 1040
Glu Ser Glu His Ser Arg Arg Lys Tyr Phe Tyr Leu Val Gly Tyr Gly		
1045	1050	1055
Met Pro Ala Leu Ile Val Ala Val Ser Ala Ala Val Asp Tyr Arg Ser		
1060	1065	1070
Tyr Gly Thr Asp Lys Val Cys Trp Leu Arg Leu Asp Thr Tyr Phe Ile		
1075	1080	1085
Trp Ser Phe Ile Gly Pro Ala Thr Leu Ile Ile Met Leu Asn Val Ile		
1090	1095	1100
Phe Leu Gly Ile Ala Leu Tyr Lys Met Phe His His Thr Ala Ile Leu		
1105	1110	1115 1120
Lys Pro Glu Ser Gly Cys Leu Asp Asn Ile Lys Ser Trp Val Ile Gly		
1125	1130	1135
Ala Ile Ala Leu Leu Cys Leu Leu Gly Leu Thr Trp Ala Phe Gly Leu		
1140	1145	1150
Met Tyr Ile Asn Glu Ser Thr Val Ile Met Ala Tyr Leu Phe Thr Ile		
1155	1160	1165
Phe Asn Ser Leu Gln Gly Met Phe Ile Phe Ile Phe His Cys Val Leu		
1170	1175	1180
Gln Lys Lys Val Arg Lys Glu Tyr Gly Lys Cys Leu Arg Thr His Cys		
1185	1190	1195 1200
Cys Ser Gly Lys Ser Thr Glu Ser Ser Ile Gly Ser Gly Lys Thr Ser		
1205	1210	1215
Gly Ser Arg Thr Pro Gly Arg Tyr Ser Thr Gly Ser Gln Ser Arg Ile		
1220	1225	1230
Arg Arg Met Trp Asn Asp Thr Val Arg Lys Gln Ser Glu Ser Ser Phe		
1235	1240	1245
Ile Thr Gly Asp Ile Asn Ser Ser Ala Ser Leu Asn Arg Glu Gly Leu		
1250	1255	1260
Leu Asn Asn Ala Arg Asp Thr Ser Val Met Asp Thr Leu Pro Leu Asn		

1265	1270	1275	1280
Gly Asn His Gly Asn Ser Tyr Ser Ile Ala Gly Gly Glu Tyr Leu Ser			
1285	1290	1295	
Asn Cys Val Gln Ile Ile Asp Arg Gly Tyr Asn His Asn Glu Thr Ala			
1300	1305	1310	
Leu Glu Lys Lys Ile Leu Lys Glu Leu Thr Ser Asn Tyr Ile Pro Ser			
1315	1320	1325	
Tyr Leu Asn Asn His Glu Arg Ser Ser Glu Gln Asn Arg Asn Met Met			
1330	1335	1340	
Asn Lys Leu Val Asp Asn Leu Gly Ser Gly Ser Glu Asp Asp Ala Ile			
1345	1350	1355	1360
Val Leu Asp Asp Ala Ala Ser Phe Asn His Glu Glu Ser Leu Gly Leu			
1365	1370	1375	
Glu Leu Ile His Glu Glu Ser Asp Ala Pro Leu Leu Pro Pro Arg Val			
1380	1385	1390	
Tyr Ser Thr Asp Asn His Gln Pro His His Tyr Ser Arg Arg Arg Leu			
1395	1400	1405	
Pro Gln Asp His Ser Glu Ser Phe Phe Pro Leu Leu Thr Asp Glu His			
1410	1415	1420	
Thr Glu Asp Pro Gln Ser Pro His Arg Asp Ser Leu Tyr Thr Ser Met			
1425	1430	1435	1440
Pro Ala Leu Ala Gly Val Pro Ala Ala Asp Ser Val Thr Thr Ser Thr			
1445	1450	1455	
Gln Thr Glu Ala Ala Ala Lys Gly Gly Asp Ala Glu Asp Val Tyr			
1460	1465	1470	
Tyr Lys Ser Met Pro Asn Leu Gly Ser Arg Asn His Val His Pro Leu			
1475	1480	1485	
His Ala Tyr Tyr Gln Leu Gly Arg Gly Ser Ser Asp Gly Phe Ile Val			
1490	1495	1500	
Pro Pro Asn Lys Asp Gly Ala Ser Pro Glu Gly Thr Ser Lys Gly Pro			
1505	1510	1515	1520
Ala His Leu Val Thr Ser Leu			

1525

<210> 10

<211> 541

<212> PRT

<213> HUMAN

<400> 10

Met Asp Phe Glu Ser Gly Gln Val Asp Pro Leu Ala Ser Val Ile Leu
1 5 10 15

Pro Pro Asn Leu Leu Glu Asn Leu Ser Pro Glu Asp Ser Val Leu Val
20 25 30

Arg Arg Ala Gln Phe Thr Phe Phe Asn Lys Thr Gly Leu Phe Gln Asp
35 40 45

Val Gly Pro Gln Arg Lys Thr Leu Val Ser Tyr Val Met Ala Cys Ser
50 55 60

Ile Gly Asn Ile Thr Ile Gln Asn Leu Lys Asp Pro Val Gln Ile Lys
65 70 75 80

Ile Lys His Thr Arg Thr Gln Glu Val His His Pro Ile Cys Ala Phe
85 90 95

Trp Asp Leu Asn Lys Asn Lys Ser Phe Gly Gly Trp Asn Thr Ser Gly
100 105 110

Cys Val Ala His Arg Asp Ser Asp Ala Ser Glu Thr Val Cys Leu Cys
115 120 125

Asn His Phe Thr His Phe Gly Val Leu Met Asp Leu Pro Arg Ser Ala
130 135 140

Ser Gln Leu Asp Ala Arg Asn Thr Lys Val Leu Thr Phe Ile Ser Tyr
145 150 155 160

Ile Gly Cys Gly Ile Ser Ala Ile Phe Ser Ala Ala Thr Leu Leu Thr
165 170 175

Tyr Val Ala Phe Glu Lys Leu Arg Arg Asp Tyr Pro Ser Lys Ile Leu
180 185 190

Met Asn Leu Ser Thr Ala Leu Leu Phe Leu Asn Leu Leu Phe Leu Leu
195 200 205

Asp Gly Trp Ile Thr Ser Phe Asn Val Asp Gly Leu Cys Ile Ala Val
 210 215 220
 Ala Val Leu Leu His Phe Phe Leu Leu Ala Thr Phe Thr Trp Met Gly
 225 230 235 240
 Leu Glu Ala Ile His Met Tyr Ile Ala Leu Val Lys Val Phe Asn Thr
 245 250 255
 Tyr Ile Arg Arg Tyr Ile Leu Lys Phe Cys Ile Ile Gly Trp Gly Leu
 260 265 270
 Pro Ala Leu Val Val Ser Val Val Leu Ala Ser Arg Asn Asn Asn Glu
 275 280 285
 Val Tyr Gly Lys Glu Ser Tyr Gly Lys Glu Lys Gly Asp Glu Phe Cys
 290 295 300
 Trp Ile Gln Asp Pro Val Ile Phe Tyr Val Thr Cys Ala Gly Tyr Phe
 305 310 315 320
 Gly Val Met Phe Phe Leu Asn Ile Ala Met Phe Ile Val Val Met Val
 325 330 335
 Gln Ile Cys Gly Arg Asn Gly Lys Arg Ser Asn Arg Thr Leu Arg Glu
 340 345 350
 Glu Val Leu Arg Asn Leu Arg Ser Val Val Ser Leu Thr Phe Leu Leu
 355 360 365
 Gly Met Thr Trp Gly Phe Ala Phe Phe Ala Trp Gly Pro Leu Asn Ile
 370 375 380
 Pro Phe Met Tyr Leu Phe Ser Ile Phe Asn Ser Leu Gln Gly Leu Phe
 385 390 395 400
 Ile Phe Ile Phe His Cys Ala Met Lys Glu Asn Val Gln Lys Gln Trp
 405 410 415
 Arg Gln His Leu Cys Cys Gly Arg Phe Arg Leu Ala Asp Asn Ser Asp
 420 425 430
 Trp Ser Lys Thr Ala Thr Asn Ile Ile Lys Lys Ser Ser Asp Asn Leu
 435 440 445
 Gly Lys Ser Leu Ser Ser Ser Ser Ile Gly Ser Asn Ser Thr Tyr Leu
 450 455 460

Thr Ser Lys Ser Lys Ser Ser Ser Thr Thr Tyr Phe Lys Arg Asn Ser
465 470 475 480

His Thr Asp Ser Ala Ser Met Asp Lys Ser Leu Ser Lys Leu Ala His
485 490 495

Ala Asp Gly Asp Gln Thr Ser Ile Ile Pro Val His Gln Val Ile Asp
500 505 510

Lys Val Lys Gly Tyr Cys Asn Ala His Ser Asp Asn Phe Tyr Lys Asn
515 520 525

Ile Ile Met Ser Asp Thr Phe Ser His Ser Thr Lys Phe
530 535 540

<210> 11
<211> 1582
<212> PRT
<213> Caenorhabditis elegans

<400> 11
Met Ala Thr Ala Ser Thr Glu Ile Ser Glu Phe Ser Glu Ala Ile Glu
1 5 10 15

Ser Thr Phe Asp Leu Asp Phe Thr Ala His Gln Thr Glu Ile Ile Gly
20 25 30

Thr Tyr Trp Asn Leu Arg Ala Leu Leu Arg Leu His Arg Ser Leu Val
35 40 45

Ala Ile Asp His Val Ser Gln Lys Ser Phe Trp Glu Arg Tyr Asn His
50 55 60

Trp Ile Gln Leu Ser Met Leu Val Ser Asn Gln Asn Val Asn Leu Cys
65 70 75 80

Gln Ser Asn Ile Cys Gln Asn Gly Gly Thr Cys Leu Val Ala Ser Ser
85 90 95

Val Pro Ala Thr Ala Thr Cys Pro Lys Asn Ser Ile Tyr Tyr Met Gly
100 105 110

Ser Cys Tyr Val Phe Asp Thr Thr Leu Arg Asn Trp Asn Asp Ala Ala
115 120 125

Leu Tyr Cys Asn Asn Met Asn Ser Ala Thr Leu Pro Leu Val Glu Ser
130 135 140

Ala Glu Asp Gln Ala Phe Phe Ala Gly Tyr Leu Gln Ala Met Ile Pro
145 150 155 160

Ser Asn Pro Pro Ala Asp Met Arg Pro Pro Pro Asp Gly Ile Trp Thr
165 170 175

Ala Val Arg Gly Val Asn Asn Val Thr Arg Ala Ser Trp Val Tyr Tyr
180 185 190

Pro Gly Ser Phe Leu Val Thr Asp Thr Phe Trp Ala Pro Gln Glu Pro
195 200 205

Asn Ile Tyr Val Asn Tyr Asn Asp Val Cys Val Ala Leu Gln Ser Asp
210 215 220

Ser Phe Tyr Arg Glu Trp Thr Thr Ala Leu Cys Thr Ile Leu Lys Tyr
225 230 235 240

Thr Val Cys Lys Val Ala Pro Thr Gln Ile Gln Ala Lys Tyr Val Ala
245 250 255

Gln Cys Ser Cys Pro Asn Gly Tyr Gly Gly Gln Thr Cys Glu Thr Gln
260 265 270

Ser Thr Thr Asn Gln Gln Ala Ser Thr Gln Arg Thr Cys Gly Ser Asn
275 280 285

Asp Phe Gln Phe Ser Cys Pro Asn Asp Gln Thr Ile Thr Val Asp Phe
290 295 300

Ala Ser Phe Gly Ala Gln Gly Gly Ser Ile Ile Thr Ser Pro Pro Asp
305 310 315 320

Ala Leu Leu Gln Gln Ile Val Gln Lys Val Asn Ala Glu Thr Lys Lys
325 330 335

Thr Val Asn Phe Trp Ile Gly Thr Pro Asn Asn Cys Gln Leu Leu Met
340 345 350

Val Thr Gly Ser Ser Thr Ser Tyr Ser Gln Cys Pro Ser Ser Pro Ser
355 360 365

Ser Thr Ala Asn Val Ile Cys Ser Thr Val Pro Gln Ser Thr Ala Ser
370 375 380

Val Ser Ala Arg Pro Thr Gln Ser Ala Pro Val Asp Pro Val Ser Gln
385 390 395 400

Thr Met Ala Arg Arg Glu Val Tyr Thr Gly Val Gln Pro Ile Ala Ser
 405 410 415
 Ala Leu Gly Gly Gln Ser Lys Lys Thr Asn Arg Lys Leu Asn Asn Ile
 420 425 430
 Cys Gln Thr Lys Ile Gly Ala Pro Leu Ser Leu Phe Leu Phe Ser Arg
 435 440 445
 Asn Glu Val Ile Thr Gly Phe Val Cys Ile Ser Leu Ile Ser Ala Ser
 450 455 460
 Pro Gln Ile Ile Tyr Tyr Leu Cys Ala Val Ser Leu Ile Cys His Pro
 465 470 475 480
 Ser Val Pro Asp Ser Ile Asn Lys Pro Arg Tyr Cys Lys Lys Glu Lys
 485 490 495
 Lys Asp Gly Ile Thr Tyr Glu Gln Thr Arg Ala Cys Met Leu His Glu
 500 505 510
 Gln Pro Cys Pro Asp Pro Gln Asn Val Glu Gly Thr Val Thr Arg Tyr
 515 520 525
 Cys Asn Cys Gln Thr Ala Lys Trp Glu Thr Pro Asp Thr Thr Asn Cys
 530 535 540
 Thr His Arg Trp Val Ala Glu Met Glu Thr Ala Ile Lys Asp Asn Gln
 545 550 555 560
 Pro Val Glu Asp Ile Ser Ser Thr Val Asn Arg Gln Leu Lys Ser Thr
 565 570 575
 Ile Glu Arg Thr Leu Phe Gly Gly Asp Ile Thr Gly Thr Val Arg Leu
 580 585 590
 Ser Asn Asp Met Leu Ser Leu Ala Arg Asn Gln Phe Ser Val Leu Asn
 595 600 605
 Asp Arg Asn Leu Arg Glu Asn Lys Ala Arg Asn Phe Thr Glu Asn Leu
 610 615 620
 Gly Gly Ser Gly Asp Gln Leu Leu Ser Pro Val Ala Ala Thr Val Trp
 625 630 635 640
 Asp Gln Leu Ser Ser Thr Ile Arg Ile Gln His Ala Ser Lys Leu Met
 645 650 655

Ser Val Leu Glu Gln Ser Val Leu Leu Leu Gly Asp Tyr Met Thr Asp
 660 665 670
 Gln Lys Leu Asn Leu Gln Tyr Ile Asn Trp Ala Met Glu Val Glu Arg
 675 680 685
 Ser Glu Pro Glu Val Gln Thr Phe Gly Ala Ala Ala Ser Pro Asn Val
 690 695 700
 Gln Asp Asp Met Gly Met Met Arg Val Met Ala Ala Ala Pro Pro Ala
 705 710 715 720
 Pro Gln Pro Glu Thr Asn Thr Thr Ile Met Phe Pro Ser Leu Lys Leu
 725 730 735
 Ser Pro Thr Ile Thr Leu Pro Ser Ala Ser Leu Leu Ser Ser Leu Ala
 740 745 750
 Ser Pro Thr Pro Val Ala Gly Gly Gly Pro Ser Ile Leu Ser Ser Phe
 755 760 765
 Gln Asp Asp Thr Pro Val Gly Met Ala Ser Thr Pro Asn Leu Asn Arg
 770 775 780
 Asn Pro Val Lys Leu Gly Tyr Tyr Ala Phe Ala Gly Phe Gly Gln Leu
 785 790 795 800
 Leu Asn Asn Asn Asn Asp His Thr Leu Ile Asn Ser Gln Val Ile Gly
 805 810 815
 Ala Ser Ile Gln Asn Ala Thr Gln Ser Val Thr Leu Pro Val Asp His
 820 825 830
 Pro Val Thr Phe Thr Phe Gln His Leu Thr Thr Lys Gly Val Ser Asn
 835 840 845
 Pro Arg Cys Val Tyr Trp Asp Leu Met Glu Ser Lys Trp Ser Thr Leu
 850 855 860
 Gly Cys Thr Leu Ile Ala Thr Ser Ser Asn Ser Ser Gln Cys Ser Cys
 865 870 875 880
 Thr His Leu Thr Ser Phe Ala Ile Leu Met Asp Ile Ser Gly Gln Val
 885 890 895
 Gly Arg Leu Ser Gly Gly Leu Ala Ser Ala Leu Asp Val Val Ser Thr
 900 905 910

Ile Gly Cys Ala Ile Ser Ile Val Cys Leu Ala Leu Ser Val Cys Val
 915 920 925

Phe Thr Phe Phe Arg Asn Leu Gln Asn Val Arg Asn Ser Ile His Arg
 930 935 940

Asn Leu Cys Leu Cys Leu Leu Ile Ala Glu Leu Val Phe Val Ile Gly
 945 950 955 960

Met Asp Arg Thr Gly Asn Arg Thr Gly Cys Gly Val Val Ala Ile Leu
 965 970 975

Leu His Tyr Phe Phe Leu Ser Ser Phe Cys Trp Met Leu Leu Glu Gly
 980 985 990

Tyr Gln Leu Tyr Met Met Leu Ile Gln Val Phe Glu Pro Asn Arg Thr
 995 1000 1005

Arg Ile Phe Leu Tyr Tyr Leu Phe Cys Tyr Gly Thr Pro Ala Val Val
 1010 1015 1020

Val Ala Ile Ser Ala Gly Ile Lys Trp Glu Asp Tyr Gly Thr Asp Ser
 1025 1030 1035 1040

Tyr Cys Trp Ile Asp Thr Ser Thr Pro Thr Ile Trp Ala Phe Val Ala
 1045 1050 1055

Pro Ile Ile Val Ile Ile Ala Ala Asn Ile Ile Phe Leu Leu Ile Ala
 1060 1065 1070

Leu Lys Val Val Leu Ser Val Gln Ser Arg Asp Arg Thr Lys Trp Gly
 1075 1080 1085

Arg Ile Ile Gly Trp Leu Lys Gly Ser Ala Thr Leu Leu Cys Leu Leu
 1090 1095 1100

Gly Ile Thr Trp Ile Phe Gly Phe Leu Thr Ala Val Lys Gly Gly Thr
 1105 1110 1115 1120

Gly Thr Ala Phe Ala Trp Ile Phe Thr Ile Leu Asn Cys Thr Gln Gly
 1125 1130 1135

Ile Phe Ile Phe Val Leu His Val Val Leu Asn Glu Lys Val Arg Ala
 1140 1145 1150

Ser Ile Val Arg Trp Leu Arg Thr Gly Ile Cys Cys Leu Pro Glu Thr
 1155 1160 1165

Ser Ser Ala Ala Tyr Asn Ser Arg Ser Phe Leu Ser Ser Arg Gln Arg
 1170 1175 1180

Ile Leu Asn Met Ile Lys Val Asn Gly His Ser Tyr Pro Ser Thr Ala
 1185 1190 1195 1200

Ser Thr Asp Asp Lys Glu Lys Gln Leu Thr Pro Ile Thr Lys Thr Thr
 1205 1210 1215

Asp Trp Leu Ser Arg Leu Pro Asn Gln Asp Ser Val Ser Ile Pro Glu
 1220 1225 1230

Ser Asn Phe Asn Asn Leu Asn Gly Thr Leu Glu Asn Ser Asn Leu Asn
 1235 1240 1245

Ser Ala Glu Ile Lys Glu Glu Asp Glu Ile Pro Glu Leu Arg Arg Arg
 1250 1255 1260

Val Thr Val Asp Leu Asn Pro Met Ile Val Ser Asn Asn Glu Ile Glu
 1265 1270 1275 1280

Arg Met Ser His Ala Ser Ser Asp Pro Arg Gly Ser Gln Ile Ile Glu
 1285 1290 1295

Val Thr Ala Val Glu Lys Lys Ala Pro Val Lys Arg Ile Lys Phe Pro
 1300 1305 1310

Leu Gly Ala Lys Gln Ser Glu Arg Gly Ser Gln His Arg Thr Lys Ala
 1315 1320 1325

Lys His Gly Thr Gly Thr Leu Val Ser Pro Trp His Ile Val Thr Ala
 1330 1335 1340

Ala His Leu Ile Gly Ile Ser Glu Asp Pro Leu Pro Asp Cys Asp Thr
 1345 1350 1355 1360

Gly Asn Leu Arg Glu Ala Tyr Phe Val Arg Asp Tyr Lys Asn Phe Val
 1365 1370 1375

Ala Phe Val Asn Val Thr Cys Ala Val Pro Glu Met Cys Lys Gly Leu
 1380 1385 1390

His Arg Lys Asp Met Phe Lys Pro Leu Ala Ile Lys Ser Leu Tyr Ile
 1395 1400 1405

Arg Lys Gly Tyr Val Gly Asp Gly Cys Ile Asp Arg Glu Ser Phe Asn
 1410 1415 1420

Asp Ile Ala Val Phe Glu Leu Glu Glu Pro Ile Glu Phe Ser Lys Asp
 1425 1430 1435 1440

Ile Phe Pro Ala Cys Leu Pro Ser Ala Pro Lys Ile Pro Arg Ile Arg
 1445 1450 1455

Glu Thr Gly Tyr Lys Leu Phe Gly Tyr Gly Arg Asp Pro Ser Asp Ser
 1460 1465 1470

Val Leu Glu Ser Gly Lys Leu Lys Ser Leu Tyr Ser Phe Val Ala Glu
 1475 1480 1485

Cys Ser Asp Asp Phe Pro Tyr Gly Gly Val Tyr Cys Thr Ser Ala Val
 1490 1495 1500

Asn Arg Gly Leu Ser Cys Asp Gly Asp Ser Gly Ser Gly Val Val Arg
 1505 1510 1515 1520

Thr Ser Asp Thr Arg Asn Val Gln Val Leu Val Gly Val Leu Ser Ala
 1525 1530 1535

Gly Met Pro Cys Pro Glu Leu Tyr Asp Thr His Asn Arg Gln Arg Gln
 1540 1545 1550

Gln Arg Arg Gln Leu Thr Gln Glu Thr Asp Leu Leu Val Asp Val Ser
 1555 1560 1565

Ala His Val Asp Phe Phe Cys Thr Cys Cys Gly Met Cys Ser
 1570 1575 1580

<210> 12

<211> 198

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthesized
 peptide

<400> 12

Met Glu Thr Tyr Ser Leu Ser Leu Gly Asn Gln Ser Val Val Glu Pro
 1 5 10 15

Asn Ile Ala Ile Gln Ser Ala Asn Phe Ser Ser Glu Asn Ala Val Gly
 20 25 30

Pro Ser Asn Val Arg Phe Ser Val Gln Lys Gly Ala Ser Ser Ser Leu
 35 40 45

Val Ser Ser Ser Thr Phe Ile His Thr Asn Val Asp Gly Leu Asn Pro
 50 55 60

Asp Ala Gln Thr Glu Leu Gln Val Leu Leu Asn Met Thr Lys Asn Tyr
 65 70 75 80

Thr Lys Thr Cys Gly Phe Val Val Tyr Gln Asn Asp Lys Leu Phe Gln
 85 90 95

Ser Lys Thr Phe Thr Ala Lys Ser Asp Phe Ser Gln Lys Ile Ile Ser
 100 105 110

Ser Lys Thr Asp Glu Asn Glu Gln Asp Gln Ser Ala Ser Val Asp Met
 115 120 125

Val Phe Ser Pro Lys Tyr Asn Gln Lys Glu Phe Gln Leu Tyr Ser Tyr
 130 135 140

Ala Cys Val Tyr Trp Asn Leu Ser Ala Lys Asp Trp Asp Thr Tyr Gly
 145 150 155 160

Cys Gln Lys Asp Lys Gly Thr Asp Gly Phe Leu Arg Cys Arg Cys Asn
 165 170 175

His Thr Thr Asn Phe Ala Val Leu Met Thr Phe Lys Lys Asp Tyr Gln
 180 185 190

Tyr Pro Lys Ser Leu Asp
 195

<210> 13

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthesized
 peptide

<400> 13

Gln Ile Val Thr Arg Lys Val Arg Lys Thr
 1 5 10

<210> 14
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthesized
peptide

<400> 14
Glu Asn Ser Asn Lys Asn Leu Gln Thr Ser Asp Gly Asp Ile Asn Asn
1 5 10 15
Ile Asp Phe Asp Asn Asn Asp Ile Pro Arg Thr Asp Thr Ile Asn Ile
20 25 30
Pro Asn Pro Met Cys Thr
35

<210> 15
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthesized
peptide

<400> 15
Ile Arg Thr Met Lys Pro Leu Pro Arg His
1 5 10

<210> 16
<211> 41
<212> PRT
<213> Artificial Sequence

<400> 16
Thr Val Gly Val Ile Tyr Ser Gln Asn Gly Asn Asn Pro Gln Trp Glu
1 5 10 15
Leu Asp Tyr Arg Gln Glu Lys Ile Cys Trp Leu Ala Ile Pro Glu Pro
20 25 30
Asn Gly Val Ile Lys Ser Pro Leu Leu
35 40

Arg Pro Arg Leu Arg Val Lys Met Tyr Asn Phe Leu Arg Ser Leu Pro
 35 40 45

Thr Leu His Glu Arg Phe Arg Leu Leu Glu Thr Ser Pro Ser Thr Glu
 50 55 60

Glu Ile Thr Leu Ser Glu Ser Asp Asn Ala Lys Glu Ser Ile
 65 70 75

<210> 20

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: HGPRBMY6 5'
 PRIMER

<400> 20

cgggatgcct agatgctttc ctttgcattg tcactttc

38

<210> 21

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: HGPRBMY6 3'
 FLAG TAG PRIMER

<400> 21

cggggatccc tacttgctgt cgtcgtcctt gtagtccatg atgctttcct ttgcattgtc 60
 actttc 66

<210> 22

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: HGPRBMY6
 Forward primer 383

<400> 22

cagacaccat taacatcccg aat

23

<210> 23

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: HGPRBMY6
Reverse primer 384

<400> 23

agaatgaaat gccgaggaag ag

22

<210> 24

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: GAPDH-F3
forward primer

<400> 24

agccgagcca catcgct

17

<210> 25

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: GAPDH-R1
reverse primer

<400> 25

gtgaccaggc gcccaatac

19

<210> 26

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: GAPDH-PVIC
Taqman(R) Probe

<400> 26

caaatccggtt gactccgacc ttcacctt

28

<210> 27

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 27

Gln Ser Lys Thr Phe Thr Ala Lys Ser Asp Phe Ser Gln

1

5

10

<210> 28

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 28

Ala Lys Ser Asp Phe Ser Gln Lys Ile Ile Ser Ser Lys

1

5

10

<210> 29

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 29

Ser Gln Lys Ile Ile Ser Ser Lys Thr Asp Glu Asn Glu

1

5

10

<210> 30
 <211> 13
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 30
 Val Asp Met Val Phe Ser Pro Lys Tyr Asn Gln Lys Glu
 1 5 10

<210> 31
 <211> 13
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 31
 Val Tyr Trp Asn Leu Ser Ala Lys Asp Trp Asp Thr Tyr
 1 5 10

<210> 32
 <211> 13
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 polypeptide

<400> 32
 Phe Ala Val Leu Met Thr Phe Lys Lys Asp Tyr Gln Tyr
 1 5 10

<210> 33
 <211> 13
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 33

Ile Phe Gln Ile Val Thr Arg Lys Val Arg Lys Thr Ser
1 5 10

<210> 34

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 34

Phe Gly Ile Glu Asn Ser Asn Lys Asn Leu Gln Thr Ser
1 5 10

<210> 35

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 35

Tyr Leu Leu Ile Arg Thr Met Lys Pro Leu Pro Arg His
1 5 10

<210> 36

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 36

Met Phe Ile Thr Ile Ser Ile Lys Val Leu Trp Lys Asn

1 5 10

<210> 37
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 37
Asn Gln Asn Leu Thr Ser Thr Lys Lys Val Ser Ser Met
1 5 10

<210> 38
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 38
Gln Asn Leu Thr Ser Thr Lys Lys Val Ser Ser Met Lys
1 5 10

<210> 39
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 39
Thr Lys Lys Val Ser Ser Met Lys Lys Ile Val Ser Thr
1 5 10

<210> 40
<211> 13
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 40

Leu Val Asn Asp Asp Ser Ile Arg Ile Val Phe Ser Tyr
1 5 10

<210> 41

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 41

Ile Phe Ile Leu Tyr Thr Val Arg Thr Lys Val Phe Gln
1 5 10

<210> 42

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 42

Ser Leu Gly Asn Gln Ser Val Val Glu Pro Asn Ile Ala Ile
1 5 10

<210> 43

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 43

Ser Thr Phe Ile His Thr Asn Val Asp Gly Leu Asn Pro Asp

1

5

10

<210> 44

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 44

Gln Lys Ile Ile Ser Ser Lys Thr Asp Glu Asn Glu Gln Asp

1

5

10

<210> 45

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 45

Val Tyr Trp Asn Leu Ser Ala Lys Asp Trp Asp Thr Tyr Gly

1

5

10

<210> 46

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 46

Lys Asn Leu Gln Thr Ser Asp Gly Asp Ile Asn Asn Ile Asp

1

5

10

<210> 47

<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 47
Leu Arg Ser Leu Pro Thr Leu His Glu Arg Phe Arg Leu Leu
1 5 10

<210> 48
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 48
Leu Glu Thr Ser Pro Ser Thr Glu Glu Ile Thr Leu Ser Glu
1 5 10

<210> 49
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 49
Ser Thr Glu Glu Ile Thr Leu Ser Glu Ser Asp Asn Ala Lys
1 5 10

<210> 50
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

polypeptide

<400> 50

Glu Glu Ile Thr Leu Ser Glu Ser Asp Asn Ala Lys Glu Ser
1 5 10

<210> 51

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 51

Val Thr Arg Lys Val Arg Lys Thr Ser Val Thr Trp Val Leu
1 5 10

<210> 52

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 52

Asn Leu Thr Ser Thr Lys Lys Val Ser Ser Met Lys Lys Ile
1 5 10

<210> 53

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 53

Leu Ser Ser Ile Gly Arg Arg Lys Ser Leu Pro Ser Val Thr
1 5 10

<210> 54
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 54
Ser Leu Ser Leu Gly Asn Gln Ser Val Val Glu Pro Asn Ile
1 5 10

<210> 55
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 55
Ala Ile Gln Ser Ala Asn Phe Ser Ser Glu Asn Ala Val Gly
1 5 10

<210> 56
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 56
Leu Gln Val Leu Leu Asn Met Thr Lys Asn Tyr Thr Lys Thr
1 5 10

<210> 57
<211> 14
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 57

Leu Asn Met Thr Lys Asn Tyr Thr Lys Thr Cys Gly Phe Val
1 5 10

<210> 58

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 58

Ala Cys Val Tyr Trp Asn Leu Ser Ala Lys Asp Trp Asp Thr
1 5 10

<210> 59

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 59

Leu Arg Cys Arg Cys Asn His Thr Thr Asn Phe Ala Val Leu
1 5 10

<210> 60

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 60

Trp Lys Asn Asn Gln Asn Leu Thr Ser Thr Lys Lys Val Ser

1 5 10

<210> 61
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 61
Ile Phe Cys Leu Phe Asn Thr Thr Gln Gly Leu Gln Ile Phe
1 5 10

<210> 62
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 62
Phe Ser Val Gln Lys Gly Ala Ser Ser Ser Leu Val Ser Ser Ser Thr
1 5 10 15

<210> 63
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 63
Ile Leu Ser Asn Val Gly Cys Ala Leu Ser Val Thr Gly Leu Ala Leu
1 5 10 15

<210> 64
<211> 16
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 64

Ala Leu Ser Val Thr Gly Leu Ala Leu Thr Val Ile Phe Gln Ile Val
1 5 10 15

<210> 65

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 65

Leu Leu Phe Val Phe Gly Ile Glu Asn Ser Asn Lys Asn Leu Gln Thr
1 5 10 15

<210> 66

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 66

Val Ala Ile Thr Val Gly Val Ile Tyr Ser Gln Asn Gly Asn Asn Pro
1 5 10 15

<210> 67

<211> 99

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Oligo 1;
N=A+G+C+T; K=C+G+T

<400> 67
cgaagcgtaa gggcccagcc ggccnnknnk nnknnknnkn nknnknnknn knnknnknnk 60
nnknnknnkn nknnknnknn knnkccgggt ccgggcccgc 99

<210> 68
<211> 98
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Oligo 2;
N=A+G+C+T; V=C+A+G

<400> 68
aaaaggaaaa aagcggccgc vnnvnnvnnv nnvnnvnnvn nvnnvnnvnn vnnvnnvnnv 60
nnvnnvnnvn nvnnvnnvnn vnnngccgcc ggacccgg 98

<210> 69
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 69
Pro Gly Pro Gly Gly
1 5

<210> 70
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 70
Phe Ala Gly Gln Ile Ile Trp Tyr Asp Ala Leu Asp Thr Leu Met
1 5 10 15

<210> 71

<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 71

Ser Asp Phe Val Gly Gly Phe Trp Phe Trp Asp Ser Leu Phe Asn
1 5 10 15

<210> 72

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 72

Gly Asp Phe Trp Tyr Glu Ala Cys Glu Ser Ser Cys Ala Phe Trp
1 5 10 15

<210> 73

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 73

Leu Glu Trp Gly Ser Asp Val Phe Tyr Asp Val Tyr Asp Cys Cys
1 5 10 15

<210> 74

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

polypeptide

<400> 74

Arg Ile Asp Ser Cys Ala Lys Tyr Phe Leu Arg Ser Cys Asp
1 5 10

<210> 75

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 75

Cys Leu Arg Ser Gly Thr Gly Cys Ala Phe Gln Leu Tyr Arg Phe
1 5 10 15

<210> 76

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 76

Phe Arg Val Ser Arg Val Trp Asn Pro Pro Ser Phe Asp Ser Ala
1 5 10 15

<210> 77

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 77

His Ala Tyr Val Glu Cys Asn Asp Thr Asp Cys Arg Val Trp Phe
1 5 10 15

<210> 78
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic 5'
Primer

<400> 78
gcagcagcgg ccgcgacata ttatccaacg ttggatgtg 39

<210> 79
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic 3'
Primer

<400> 79
gcagcagtcg acgatgcttt cctttgcatt gtcac 35

<210> 80
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic 5'
Primer

<400> 80
gcagcagcgg ccgcatggag acttattcct tgtctttgg 39

<210> 81
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic 3'
Primer

<400> 81

gcagcagtcg acgtacagga taaaaatttg caatccc

37

gcagcagtcg acgtacagga taaaaatttg caatccc